

WHAT IS CLAIMED IS:

1. A substantially hydrocarbon-free, substantially stearic acid-free, transparent, syneresis-free candle comprising at least one substantially upright wick partially imbedded in a composition consisting essentially of:

(a) from about 75% by weight of said candle to about 99% by weight of said candle of a gellant-solvent-surfactant/additional solvent system consisting essentially of:

- (i) from about 20% to about 70% by weight of said candle of a gellant selected from the group consisting of (A) at least one ester-terminated polyamide; and (B) at least one tertiary amide-terminated polyamide;
- (ii) from about 15% up to about 60% by weight of said candle of a solvent selected from the group consisting of (A) at least one methyl ester of a vegetable-derived  $C_{12}$ - $C_{18}$  carboxylic acid and (B) at least one glyceryl ester of a vegetable-derived  $C_{10}$  carboxylic acid and, optionally admixed therewith, an additional solvent selected from the group consisting of dipropylene glycol and isopropyl myristate; and

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(iii) optionally, from about 3% to about 20% by weight of said candle of at least one surfactant having a hydrophile/lipophile balance in the range of from about 3 up to about 7, selected from the group consisting of, di(hydroxyethoxy)coconut amine, (hydroxy-triethoxy)coconut amine, (hydroxy-diethoxy) coconut amine, N-(hydroxyethoxy)-N-(hydroxydiethoxy)coconut amine, diethylene glycol mono(nonylphenyl)ether, hydroxy-triethoxydodecane and hydroxytriethoxytridecane;

- (b) from about 1% to about 25% by weight of said candle of a system-compatible functional composition selected from the group consisting of (A) a perfume composition; (B) an insect repellent composition and (C) an air freshener composition; and
- (c) optionally, one or more additives selected from the group consisting of an antioxidant, a stabilizer, a colorant and a flame retardant.

2. The candle of claim 1 wherein the gellant-solvent-surfactant/additional solvent system consists essentially of:

- (i) from about 20% to about 70% by weight of said candle of a gellant selected from the group consisting of (A) at least one ester-terminated polyamide and (B) at least one tertiary amide-terminated polyamide;

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- (ii) from about 15% to about 60% by weight of said candle of a solvent selected from the group consisting of (A) at least one methyl ester of a vegetable-derived  $C_{12}$ - $C_{18}$  carboxylic acid and (B) at least one glyceryl ester of a vegetable-derived  $C_{10}$  carboxylic acid and, optionally admixed therewith, an additional solvent selected from the group consisting of dipropylene glycol and isopropyl myristate; and
- (iii) from about 3% to about 20% by weight of said candle of at least one surfactant having a hydrophile/lipophile balance in the range of from about 3 to about 7, selected from the group consisting of (hydroxytriethoxy)coconut amine, di(hydroxyethoxy)coconut amine, (hydroxydiethoxy)coconut amine, N(hydroxyethoxy)-N-(hydroxydiethoxy)coconut amine, diethylene glycol mono(nonylphenyl)ether, hydroxytriethoxydodecane and hydroxytriethoxytridecane.

3. The candle of claim 1 wherein the gellant-solvent-surfactant/additional solvent system consists essentially of:

- (i) from about 20% to about 70% by weight of said candle of a gellant selected from the group consisting of (A) at least one ester-terminated polyamide and (B) at least one tertiary amide-terminated polyamide; and
- (ii) from about 15% to about 60% by weight of said candle of a solvent selected from the group consisting of (A) at least one methyl ester of a vegetable-derived C<sub>12</sub>-C<sub>18</sub> carboxylic acid and (B) at least one glyceryl ester of a vegetable-derived C<sub>10</sub> carboxylic acid and, admixed therewith, an additional solvent, isopropyl myristate.

4. The candle of claim 1 wherein the gellant is an ester-terminated polyamide having a weight-average molecular weight of about 6000 and a softening point in the range of from 88°C to 94°C prepared by reacting "x" equivalents of C<sub>36</sub> dicarboxylic acid, "y" equivalents of ethylenediamine and "z" equivalents of an alcohol selected from the group consisting of cetyl alcohol and stearyl alcohol wherein  $0.9 \leq \{x/(y+z)\} \leq 1.1$  and  $0.1 \leq \{z/(y+z)\} \leq 0.7$  and the solvent is a mixture of soy fatty acid methyl ester and isopropyl myristate, the weight ratio of soy fatty acid methyl ester:isopropyl myristate being from about 2:1 to about 20:1.

5. The candle of claim 1 wherein each component of the system-compatible functional composition has a  $\text{Clog}_{10}P$  of between 2.5 and 8.0, according to the inequality:

$2.5 \leq \text{Clog}_{10}P \leq 8.0$ , wherein the term  $\text{Clog}_{10}P$  represents the calculated logarithm to the base 10 of the n-octanol/water partition coefficient of the said component.

6. The candle of claim 1 substantially in the shape of an upright cylinder or conical frustum having substantially planar horizontally-disposed upper and lower surfaces each of which surface is substantially perpendicular to a common substantially vertically-disposed surface juxtaposed to each of said horizontally-disposed surfaces, said substantially vertically-disposed surface being coated with a fatty acid dimer-based polyamide resin.

7. The candle of claim 2 wherein the gellant is an ester-terminated polyamide having a weight-average molecular weight of about 6000 and a softening point in the range of from 88°C up to 94°C prepared by reacting "x" equivalents of  $\text{C}_{36}$  dicarboxylic acid, "y" equivalents of ethylenediamine and "z" equivalents of an alcohol selected from the group consisting of cetyl alcohol and stearyl alcohol wherein  $0.9 \leq \{x/(y+z)\} \leq 1.1$  and  $0.1 \leq \{z/(y+z)\} \leq 0.7$  and the solvent is a mixture of soy fatty acid methyl ester and isopropyl myristate, the weight ratio of soy fatty acid methyl ester: isopropyl myristate being from about 2:1 to about 20:1.

8. The candle of claim 2 wherein each component of the system-compatible functional composition has a  $\text{Clog}_{10}P$  of between 2.5 and 8.0, according to the inequality:

$2.5 \leq \text{Clog}_{10}P \leq 8.0$ , wherein the term  $\text{Clog}_{10}P$  represents the calculated logarithm to the base 10 of the n-octanol/water partition coefficient of the said component.

9. The candle of claim 2 substantially in the shape of an upright cylinder or conical frustum having substantially planar horizontally-disposed upper and lower surfaces each of which surface is substantially perpendicular to a common substantially vertically-disposed surface juxtaposed to each of said horizontally-disposed surfaces, said substantially vertically-disposed surface being coated with a fatty acid dimer-based polyamide resin.

10. The candle of claim 3 wherein the gellant is an ester-terminated polyamide having a weight-average molecular weight of about 6000 and a softening point in the range of from 88°C up to 94°C prepared by reacting "x" equivalents of  $\text{C}_{36}$  dicarboxylic acid, "y" equivalents of ethylenediamine and "z" equivalents of an alcohol selected from the group consisting of cetyl alcohol and stearyl alcohol wherein  $0.9 \leq \{x/(y+z)\} \leq 1.1$  and  $0.1 \leq \{z/(y+z)\} \leq 0.7$  and the solvent is a mixture of soy fatty acid methyl ester and isopropyl myristate, the weight ratio of soy fatty acid methyl ester: isopropyl myristate being from about 2:1 to about 20:1.

11. The candle of claim 3 wherein each component of the system-compatible functional composition has a  $\text{Clog}_{10}P$  of between 2.5 and 8.0, according to the inequality:

$2.5 \leq \text{Clog}_{10}P \leq 8.0$ , wherein the term  $\text{Clog}_{10}P$  represents the calculated logarithm to the base 10 of the n-octanol/water partition coefficient of the said component.

12. The candle of claim 3 substantially in the shape of an upright cylinder or conical frustum having substantially planar horizontally-disposed upper and lower surfaces each of which surface is substantially perpendicular to a common substantially vertically-disposed surface juxtaposed to each of said horizontally-disposed surfaces, said substantially vertically-disposed surface being coated with a fatty acid dimer-based polyamide resin.

13. A process for preparing the candle of claim 2 comprising the steps of:

- (a) mixing the gellant, solvent and surfactant at a temperature in the range of from about 95°C up to about 110°C for a time period sufficient to cause the admixture to be a stable single liquid phase;
- (b) cooling the resulting gellant-solvent-surfactant system mixture to a temperature in the range of from about 75°C up to about 85°C;
- (c) admixing a system-compatible functional composition with the resulting gellant-solvent-surfactant system mixture thereby forming a functional composition-gellant-solvent-surfactant system mixture;

- (d) optionally adding one or more additives to the resulting functional composition-gellant-solvent-surfactant system mixture;
- (e) placing the resulting mixture into a mold while the resulting mixture is in the liquid phase;
- (f) causing at least 1 candle wick to be embedded in the resulting liquid phase mixture; and
- (g) cooling the resulting mixture to ambient temperature whereby a candle is formed having two oppositely-situated substantially parallel horizontally-disposed planar surfaces, each of which is substantially perpendicular and juxtaposed to a substantially vertically-disposed surface.

14. A process for preparing the candle of claim 3 comprising the steps of;

- (a) mixing the gellant, solvent and isopropyl myristate at a temperature of about 100°C for a time period sufficient to cause the admixture to be a stable single liquid phase;
- (b) cooling the resulting gellant-solvent-isopropyl myristate system mixture to a temperature of about 90°C;
- (c) admixing a system-compatible functional composition with the gellant-solvent-isopropyl myristate mixture thereby forming a functional composition-gellant-solvent-isopropyl myristate system mixture;
- (d) optionally adding one or more additives to the resulting mixture;



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- (e) placing the resulting mixture in a molding while the resulting mixture is in the liquid phase;
  - (f) causing at least 1 candle wick to be embedded in the resulting liquid phase mixture; and
  - (g) cooling the resulting mixture to ambient temperature whereby a candle is formed having two oppositely situated substantially parallel horizontally-disposed planar surfaces, each of which is substantially perpendicular and juxtaposed to a substantially vertically-disposed surface.

15. The process of claim 13 comprising the additional steps (h), (I) and (j):

- (h) admixing a fatty acid-dimer based polyamide resin with a lower alkanol solvent at a temperature of about 60°C for a time period sufficient to cause the polyamide resin to be dissolved in said lower alkanol solvent thereby forming a polyamide-lower alkanol solution, wherein the weight ratio of polyamide resin:lower alkanol solvent is from about 2:3 to about 3:2;
- (i) coating the resulting solution onto said vertically-disposed surface while maintaining the temperature of the solution at about 60°C; and
- (j) cooling the resulting coated candle to ambient temperature.

16. The process of either of claim 14 comprising the additional steps (h), (i) and (j):

- (h) admixing a fatty acid-dimer based polyamide resin with a lower alkanol solvent at a temperature of about 60°C for a time period sufficient to cause the polyamide resin to be dissolved in said lower alkanol solvent thereby forming a polyamide-lower alkanol solution, wherein the weight ratio of polyamide resin:lower alkanol solvent is from about 2:3 to about 3:2;
- (i) coating the resulting solution onto said vertically-disposed surface while maintaining the temperature of the solution at about 60°C; and
- (j) cooling the resulting coated candle to ambient temperature.

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